



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,895	07/09/2003	Franklin B. Jones	CPW-001	9857
32836	7590	11/04/2004	EXAMINER	
GUERIN & RODRIGUEZ, LLP 5 MOUNT ROYAL AVENUE MOUNT ROYAL OFFICE PARK MARLBOROUGH, MA 01752				COMAS, YAHVEH
		ART UNIT		PAPER NUMBER
		2834		

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,895	JONES ET AL. <i>PP</i>	
	Examiner	Art Unit	
	Yahveh Comas	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 October 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 4-10, 12 and 13 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 4-10, 12 and 13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/9/2003</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Response to Arguments

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argument regarding Kessinger doesn't showing the radial difference and Heyraud not teaching the longitudinal and circumferential section or the steps between the sections is not persuasive since the structure having the longitudinal and circumferential sections with steps between the section is provided by Kessinger, which is combined with Heyraud in order to disclose a cylinder-segment surface arrangement instead of a flat conductor arrangement to provide or create a magnetic flux oriented radially (for example column 5 lines 43-55). Therefore the combination of Kessinger and Heyraud is proper.

Applicant's arguments with respect to claim 4-10 and 12-13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 5, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kessinger, Jr. et al. U.S. Patent No. 5,744,896 in view of Heyraud U.S. Patent No. 4,677,332.

Kessinger discloses a permanent magnet rotor (11) and a stator (10) having a plurality of first coils, each first coil having a pair of longitudinal section, a pair of circumferential sections and a thickness, each of the longitudinal sections (93 and 91, see fig. 7) and the circumferential sections of the first coil being disposed at a first distance, the longitudinal sections and circumferential sections of the first coil defining a substantially rectangular opening, and a plurality of second coils, each second coil having a longitudinal sections (37), circumferential sections (35 and 39) and thickness, each of the longitudinal sections coil (37) being disposed at the first radial distance from the cylindrical axis and each of the circumferential sections of the second coils being disposed at a second distance, the longitudinal sections and circumferential sections of the second coil defining a substantially rectangular opening (33) therein, one of the

longitudinal sections of the first coil being at least partially disposed in the rectangular opening (33) of an adjacent one of the second coil and one of the longitudinal sections (37) of the second coil being at least partially disposed in the rectangular opening of the first coil. Also discloses the longitudinal sections of the first and second coil having steps bends (32) at each end.

Kessinger disclose the claimed invention except for the first and second coil forming a cylindrical surface. However, Heyraud discloses a curved along a cylinder-segment surface arrangement instead of a flat conductor arrangement in order to provide or create a magnetic flux oriented radially (for example column 5 lines 43-55). Regarding to the difference in radial distance, as show above, Kessinger disclose a difference in distance between the first and second coil, wherein the longitudinal sections are aligned but the circumferential sections are arranged to have difference distances.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kessinger's invention and provide a cylindrical surface with coils having different radial distances since providing a cylindrical surface, as disclosed by Heyraud, would had been desirable to provide a magnetic flux oriented radially.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kessinger, Jr. et al. U.S. Patent No. 5,744,896, in view of Heyraud U.S. Patent No. 4,677,332 and in further view of Takahashi et al. U.S. Patent No. 4,551,645.

Kessinger in view of Heyraud discloses the claimed invention except of said first and second coil being connected in serial or parallel. However Takahashi discloses that the connection between coils can exhibit various characteristics by slightly changing the wire connection between parallel and serial (column 11, lines 1-20).

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kessinger's invention and provide a parallel or serial connection between the coils since this would have been desirable to exhibit various characteristics as disclosed by Takahashi.

Claims 4, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kessinger, Jr. et al. U.S. Patent No. 5,744,896, in view of Heyraud U.S. Patent No. 4,677,332 and in further view of Nakamura U.S. Patent No. 5,493,157.

Kessinger in view of Heyraud disclose the claimed invention except for providing more than just one layer of the coil arrangement. It is well known in the art that by providing more than one layer the efficiency of the motor is improved since the efficiency of the motor increases as the number of armature winding increases. However, an example of how the motor efficiency increases by increasing the number of armature winding is provided by Nakamura wherein a motor is provided with two layers or more in order to suppress current consumption with high speed rotation so that an efficient and high speed brushless motor without vibration and noise can be realized.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kessinger's invention and provide more than just one

layer of the coil arrangement since that would have been desirable highly efficient motor.

3. Claim 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kessinger, Jr. et al. U.S. Patent No. 5,744,896, in view of Heyraud U.S. Patent No. 4,677,332 in further view of Nakamura U.S. Patent No. 5,493,157 and in further view of Takahashi et al. U.S. Patent No. 4,551,645.

Kessinger in view of Heyraud and Ban disclose the claimed invention except of said first and second coil being connected in serial or parallel. However Takahashi discloses that the connection between coils can exhibit various characteristics by slightly changing the wire connection between parallel and serial (column 11, lines 1-20).

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kessinger's invention and provide a parallel or serial connection between the coils since this would have been desirable to exhibit various characteristics as disclosed by Takahashi.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yahveh Comas whose telephone number is (571)272-2020. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YC



KARL TAMAI
PRIMARY EXAMINER